

FIGURE 1: ISS-pST gene construct

1 GCTAGCATGG CCCTGTGGAT GCGCCTCCTG CCCCTGCTGG CGCTGCTGGC
5 51 CCTCTGGGGA CCTGACCCAG CCGCAGCCCT CGAGATGTTT CCAGCTATGC
101 CACTTTCTTC TCTGTTCGCT AACGCTGTTT TTCGGGCCCCA GCACCTGCAC
151 CAACTGGCTG CCGACACCTA CAAGGAGTTT GAGCGCGCCT ACATCCCGGA
201 GGGACAGAGG TACTCCATCC AGAACGCCCCA GGCTGCCTTC TGCTTCTCGG
251 AGACCATCCC GGCCCCCAGG GGCAAGGACG AGGCCAGCA GAGATCGGAC
10 301 GTGGAGCTGC TGCGCTTCTC GCTGCTGCTC ATCCAGTCGT GGCTCGGGCC
351 CGTGCA GTTC CTCAGCAGGG TCTTCACCAA CAGCCTGGTG TTTGGCACCT
401 CAGACCGCGT CTACGAGAAG CTGAAGGACC TGGAGGAGGG CATCCAGGCC
451 CTGATGCGGG AGCTGGAGGA TGGCAGCCCC CGGGCAGGAC AGATCCTCAA
501 GCAAACCTAC GACAAATTTG ACACAACTT GCGCAGTGAT GACGCGCTGC
15 551 TTAAGAACTA CGGGCTGCTC TCCTGCTTCA AGAAGGACCT GCACAAGGCT
601 GAGACATACC TGCGGGTCAT GAAGTGTCGC CGCTTCGTGG AGAGCAGCTG
651 TGCCTTCTAG TCTAGA (SEQ ID NO:4)

- 20 ATG...GCC- insulin secretory signal.
GCTAGC- *Nhe* I restriction site incorporated into construct in order to ligate into plasmid.
CTCGAG- *Xho* I restriction site incorporated into construct in order to ligate secretory signal and pST.
25 TCTAGA- *Xba* I restriction site incorporated into construct in order to ligate into plasmid.

FIGURE 2: ISS-pST peptide sequence.

1 MALWMRLPL LALLALWGPD PAAALEMFPA MPLSSLFANA VLRAQHLHQL
5 51 AADTYKEFER AYIPEGQRYIS IQNAQA AFCF SETIPAPT GK DEAQQRS DVE
101 LLRFSLLLIQ SWLGPVQFLS RVFTNSLVFG TSDRVYEK LK DLEEGIQALM
151 RELEDGSPRA GQILKQTYDK FDTNLRSDDA LLKNYGLLSC FKKDLHKAET
201 YLRVMKCRRF VESSCAF (SEQ ID NO:3)

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MAL...AAA- insulin secretory signal, cleaved upon secretion of pST.

LE- function of XhoI cleavage site; result in no predicted secondary structural changes to pST.

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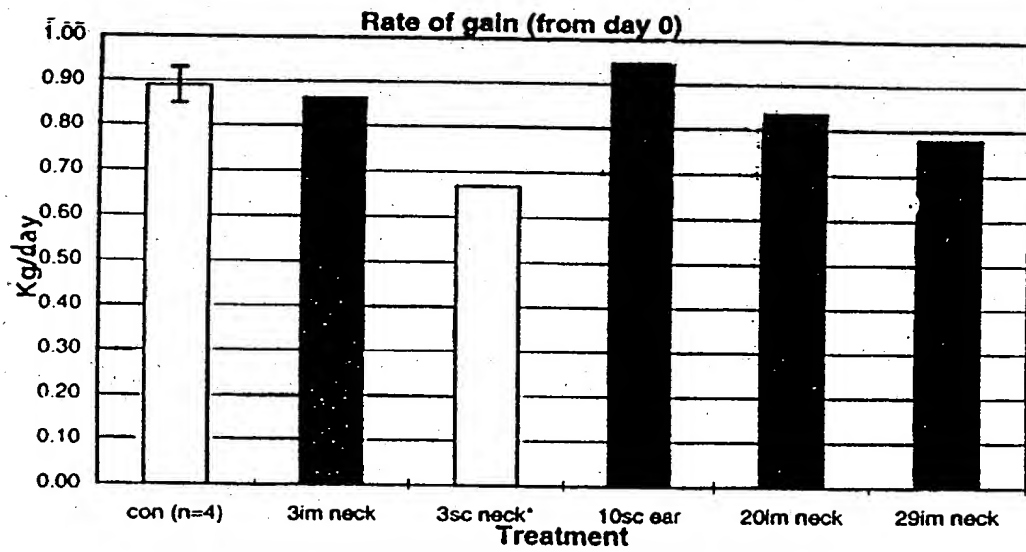


Figure 3

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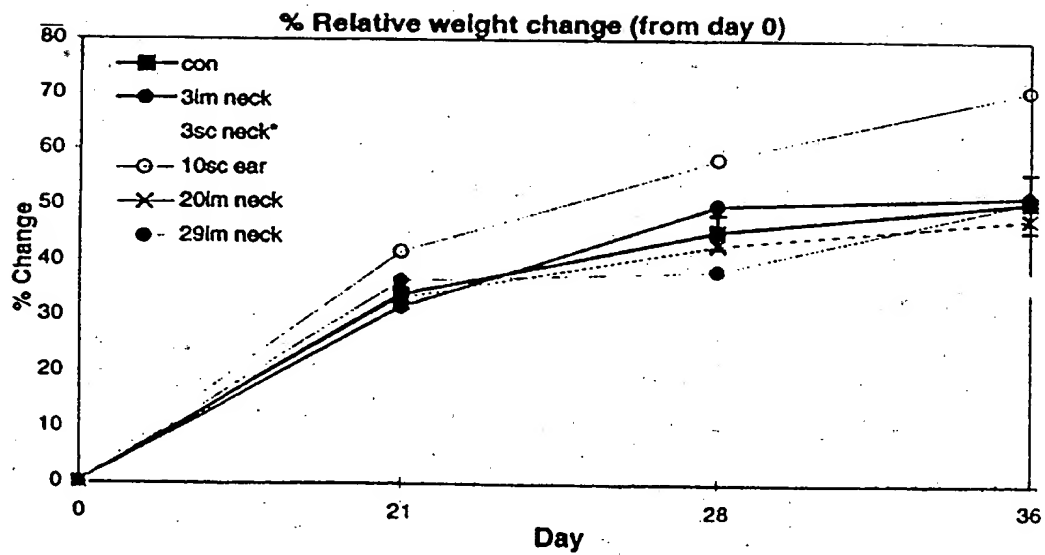


Figure 4

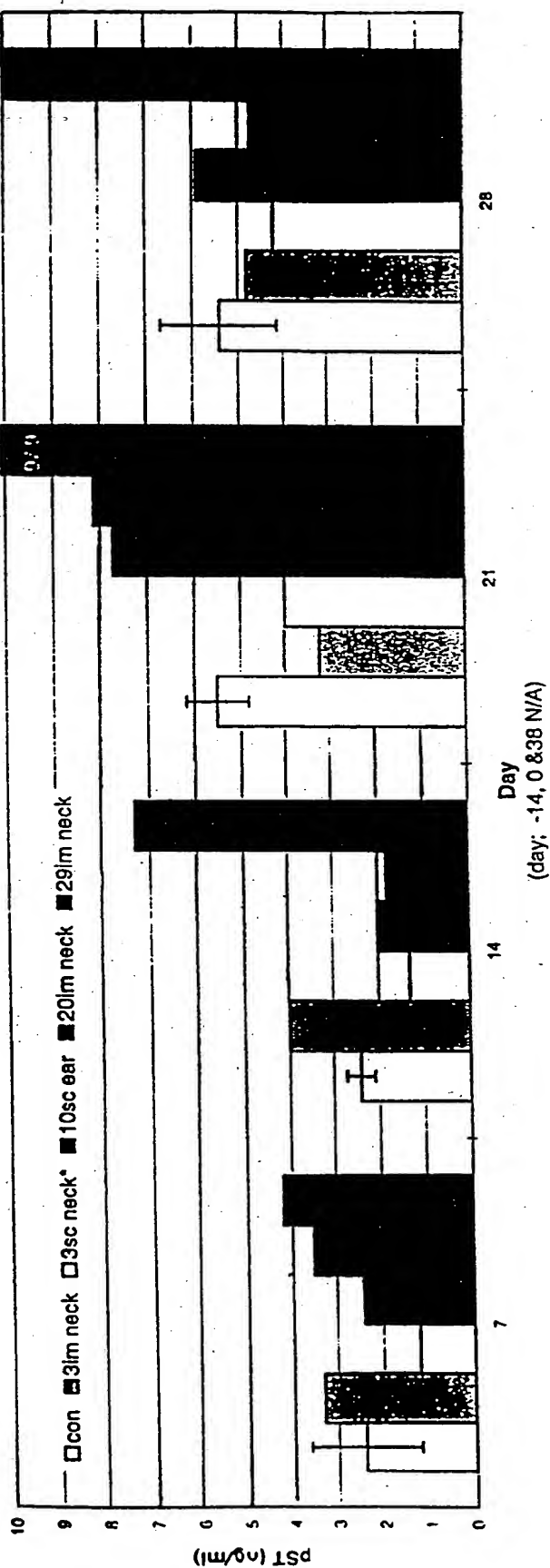


Plate 1

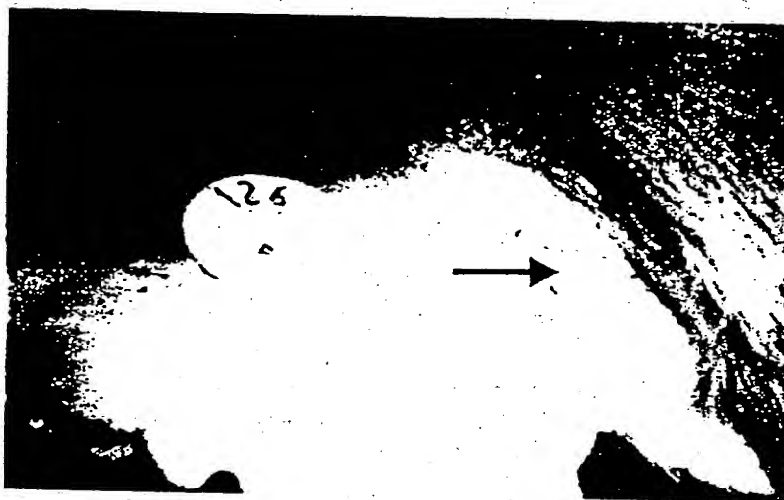


Plate 2



Figure 6

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Figure 7

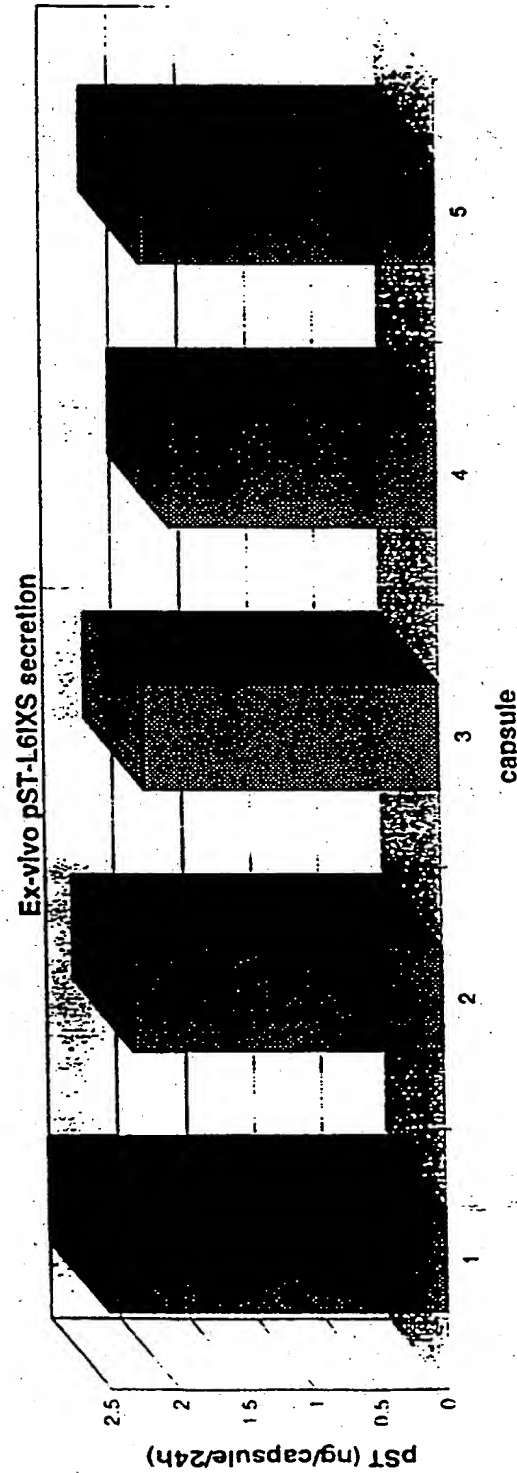
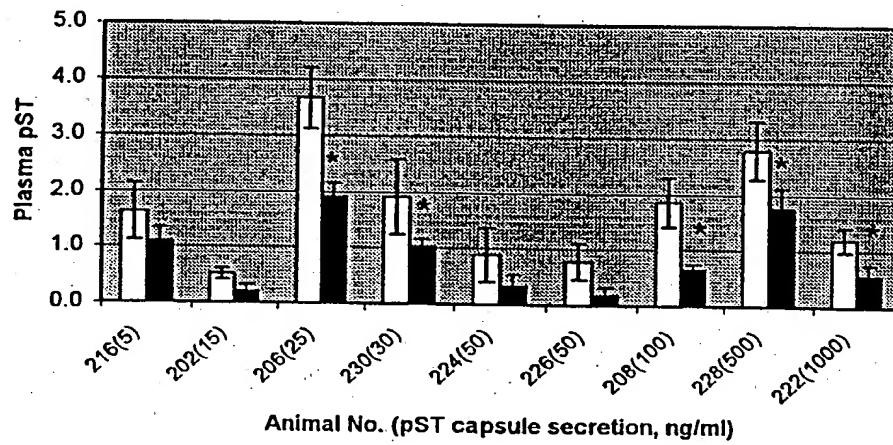
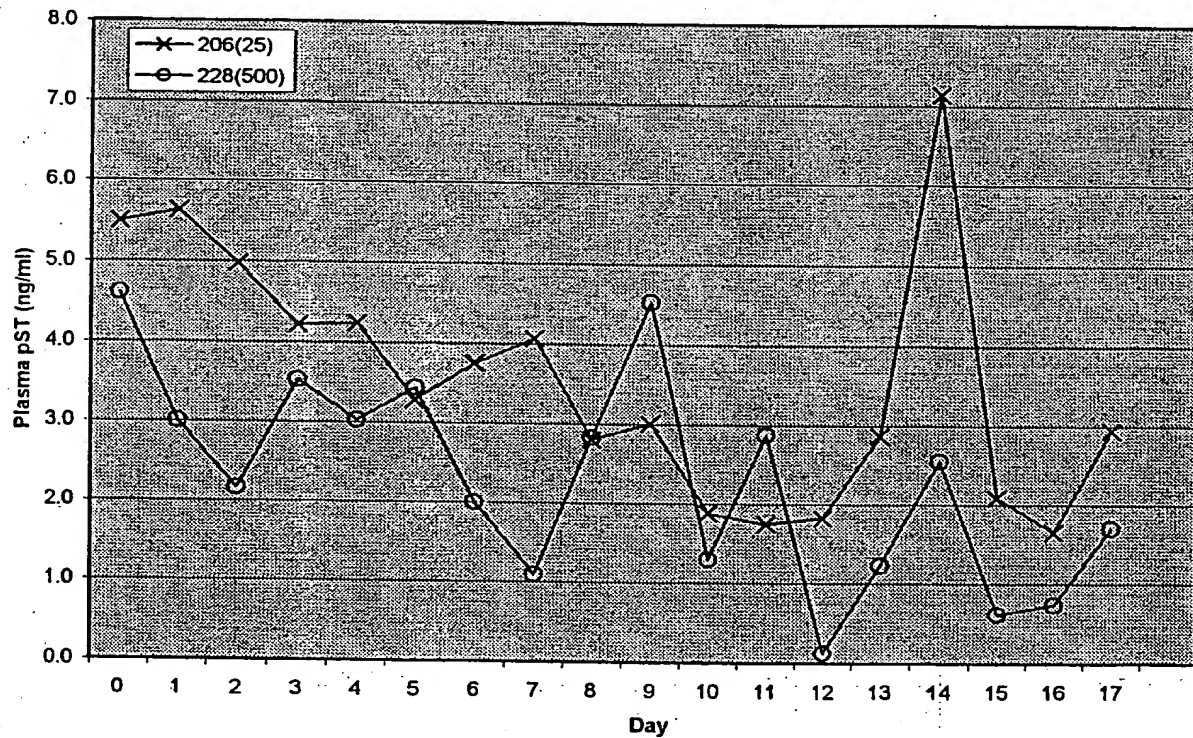


Figure 8. Mean plasma pST (over 3 hours @ 30min intervals) before (white bars) and 1 week post pST capsule administration (black bars) (* significant).

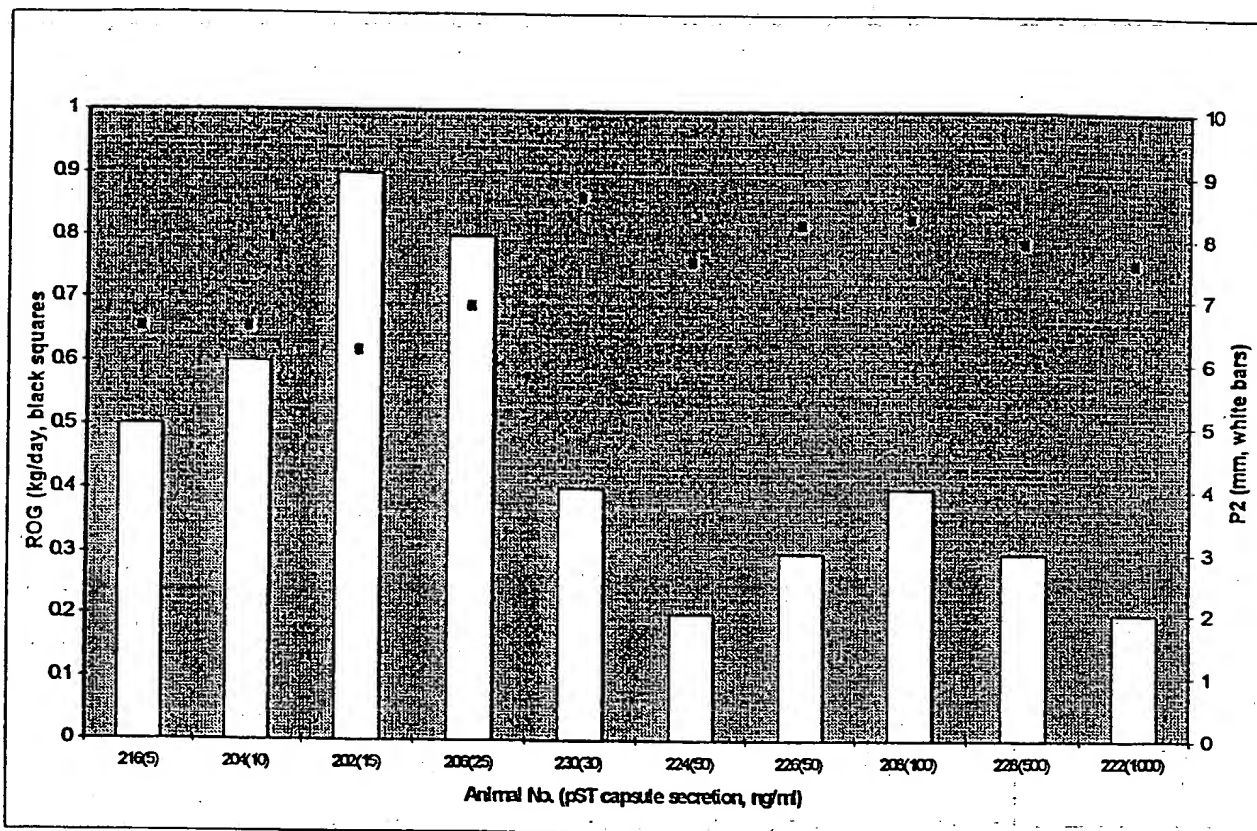


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Figure 9. Daily pST concentrations

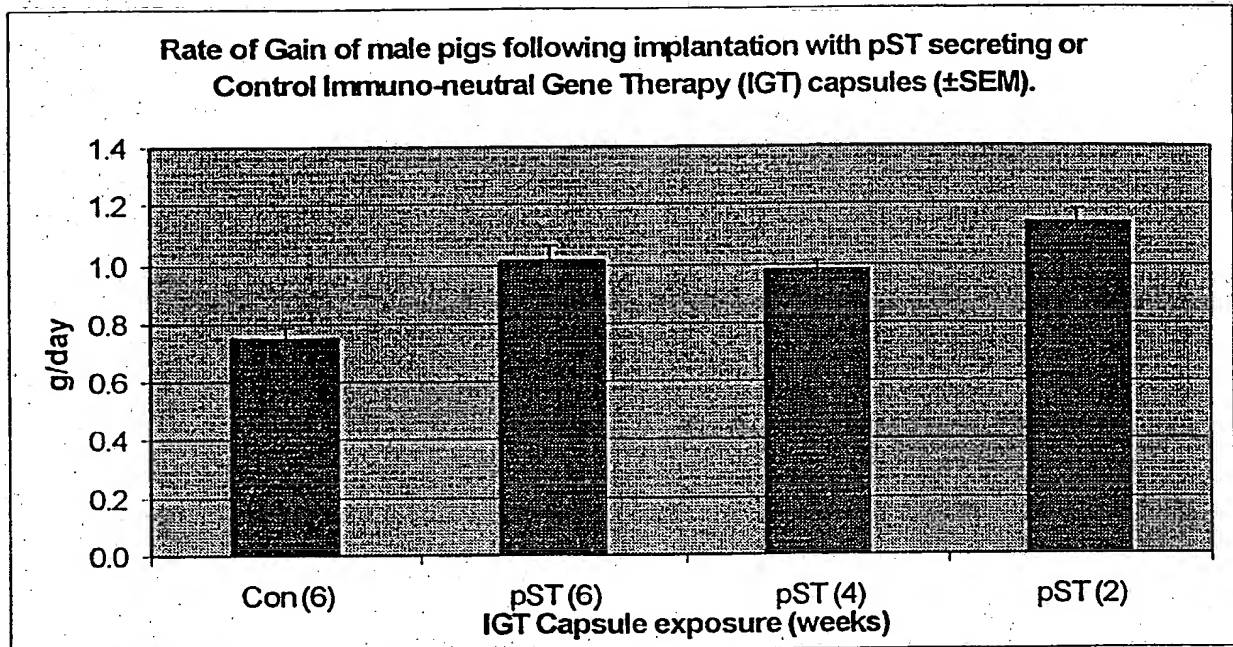
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FIGURE 10



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FIGURE 11



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FIGURE 12

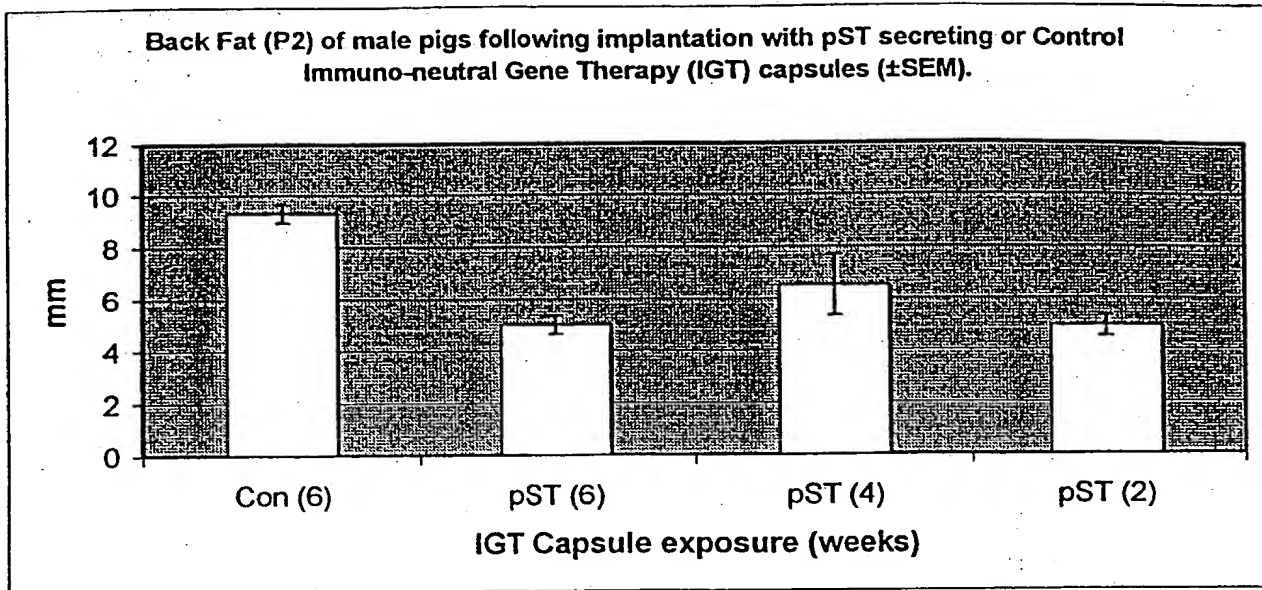


FIGURE 13